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## Mapping Informal Areas In Egypt Between The Past Interventions And Next Urban Revolution

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### ABSTRACT

This Paper is a clear attempt to analyze the efforts that done towards informal settlements in Egypt in the years with emphasis on the role of the public participation on the planning process. The aim of this paper is to map the dimensions of successful participation especially after the uprising of 25th of January revolution, the perception of participation must be different and deeper now, as in some previous cases; participation process was not completely transparent with the public, and in some cases the participation was limited or excluded to certain people or representative that worked with the government and doesn't represent the sound of local residents of informal areas. This will happen through studying and analyzing some cases of upgrading informal areas in Egypt and analyze its negative and positive points.

**Keywords:** GCR, public Participation, participatory planning, informal areas.

### ملخص البحث

يهدف هذا البحث الى القاء الضوء وتحليل الجهود المبذولة التي تم القيام بها للتعامل مع المناطق العشوائية خلال العقود الماضية وتأثير المشاركة الشعبية على عملية التخطيط. ويهدف البحث أيضا الى محاولة فهم الأبعاد المختلفة التي أثرت على المشاركة وخصوصا بعد ثورة الخامس والعشرين من يناير، حيث أن إدراك مفهوم المشاركة لابد أن يكون مختلفا وأعمق، وكما هو معروف من خلال النماذج والتجارب المختلفة، أن عملية المشاركة لا تتمتع بالشفافية الكاملة، وفي بعض الحالات تكون عملية المشاركة محدودة أو تجتنب بعض الأشخاص أو ممثلي بعض الكيانات. سيحدث ذلك من خلال دراسة وتحليل التجارب والممارسات المختلفة لتطوير المناطق العشوائية في مصر وتحليل النقاط الايجابية والسلبية بها.

### 1. INTRODUCTION

The challenge of upgrading slums is a global concern and a growing one. Slums are an increasing challenge that has a global apprehension. By 2030, it expected that 2 billion capita will be added to the world population, where most of this increase almost happens in urban areas (Pitcher, 2009). The large Egyptian cities have ceased to attract a large proportion of the migratory population. Greater Cairo, for example, now constitutes 17 percent of the total population, the same proportion as in 1966. The prime reason for this is an apparent "saturation" in the big cities for accommodating the low-income (or even very affluent) groups. (Kipper, 2011) In recent years, it has become obvious that informal housing is not just the domain of the poor but also important for the middle class, even the elite, of Second World and Third World cities (Roy & AlSayyad, 2004). Such trends point to a complex continuum of legality and illegality, where squatter settlements formed through land invasion and self-help housing can exist alongside upscale informal subdivisions formed through legal ownership and market transaction but in violation of land use regulations. (Roy, 2005)

According to UN-HABITAT's 2003 report, "Slums are the product of failed policies, bad governance, corruption and a lack of political will. Very few countries have recognized this critical situation, and very little effort is going into providing jobs or services" (El-Jesri, 2011). The failure of the Egyptian government's housing policy to provide affordable housing for a significant number of citizens has led many to build homes either semi-legally or illegally on privately-owned or public lands. (Kipper, 2011) Egyptian Governmental Intervention towards "Ashwaeyat" had passed through substantial phases. It was only a reaction of dramatic events or catastrophic incidence facing the state. Ways of intervention had mostly changed in accordance of the diagnosis of the apparent cause of this incidence. (Hassan, G. F. 2012)

## **2. THE DEFINITION OF THE (INFORMAL AREA)**

Currently, the definition of what comprises a slum or informal is the argumentative issue. The term "slums" glimpsed not only wretched and miserable living circumstances, but also other key aspects of informality (The World Bank and UNCHS (Habitat), 2000) Currently, there are many connotations and concepts for the term "slum". It indicates poor residential districts where residents do not have land tenure, depicted by the poor quality of dwellings. (Carrie, 2009; UN-Habitat, 2003).

### **- The Egyptian Definition Of The (Informal Area):**

Formally, Decadent areas or poor-served urban areas are articulated by the term "Ashwaeyat", this term truly means "random," which beholds that these areas are unpremeditated and spontaneous with illegal constructions. These areas usually culminated the poor accessibility and congestion. The Egyptian term "Ashwaeyat" turned out to be a synonym in the traditional language which holds a contempt connotation. The media and governmental authorities considerably considered these areas as black splatters inside the urban agglomeration that comprise an entire assortment of illness, crime, and bad behavior. (Sims, 2003)

## **3. INFORMAL AREAS IN EGYPT**

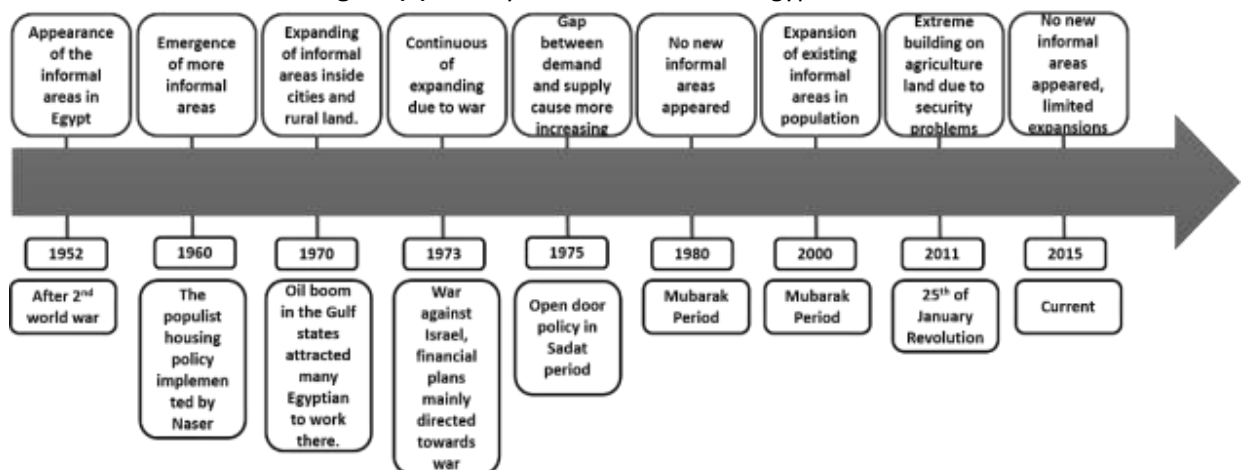
### **History Of Informal Areas In Egypt**

The urban growth in Egypt expedited under the socialist government after 1952 revolution, where the government considered itself the preface of development, and latterly, that had a significant effect on the urban expansions of Cairo in the last five decades. (Sims, 2003). The progression of "Ashwaeyat" or slums phenomenon sped up during the fiftieth of last century, because of migration of people from rural to urban areas, where they looked for chances to work inside the city (Khalifa, 2011). The shift from an agriculture-based into industrial / service based economy, made the large cities more attractive for immigrants from rural areas. (Shehayeb, 2011) Therefore, that migration in addition to high demographic growth exaggerated the housing demand inside Cairo City. Also, the populist housing policy performed in Egypt during that period was also inconvenient for providing shelter to the poor and low-income families who were precipitating to the capital. (Séjourné, 2006)

During the oil boom period or the seventieth, many Egyptians who came back from Gulf cities wanted to invest their savings in buying residential units were the informal housing the only propitiate type for them because the formal supply still was inappropriate for their needs and affordability. (Khalifa, 2011) From 1967 till 1973, (The war against Israel), the military needs to be absorbed all financial resources. Hence, all investments in the public sector construction were limited. Furthermore, the popular demand was not achieved by the private sector. (Sims, 2003)

The informal urbanization procedure formed through different changes in socioeconomic conditions that affected later on the urban life inside those areas. As an example, when young people married they cannot find affordable housing in the planned housing sector due to high rental and selling value. As a result, a lot of units in the formal market are left empty, and there is no other choice for those young people from lower and medium financial classes to require their needs in the informal market. (Bayat & Denis, 2000) The supply remained in the market was fundamentally luxury housing, where most of the units were for sale not for rent. This was spectacularly accelerated after declaration of open door policy in 1974, stated by the remittances sent those days from people who were working in Gulf those days. (Sims, 2003). Accordingly, the gap was increasing day by day between supply and demand, were those slums areas became the only suitable solution for poor Egyptian people to live in this areas. (Hassan, G. F. 2012)

**Figure (1)** History of informal areas in Egypt



(Researchers, 2015)

Egypt after 1973 war, through President Sadat, was engaged in a new economic policy called "Open Door Economic Policy," where more openness economically and politically towards the east was the new situation, the economy shifted to the market economy instead of the state-controlled economy. The middle and luxurious strata housing had provided through the private sector, where on the other side, the government announced that low-income housing should be its responsibility. Moreover, the government released itself from rental housing, and defended the rent control policy,

just with immaterial amendments. (El-Batran & Arandel, 1998). Since 1980, almost there were new slums areas manifested; yet, the rate of growth of the existing informal areas was not decreased, despite the drop in rates of population growth, in addition to issuing rigid mensuration that deprive contravention the agriculture land like military decrees no. 1 and 7. (Khalifa, 2011)

#### **Governmental Bodies Responsible For Informal Areas In Egypt:**

Ministry of Housing represented in general organization for physical planning (GOPP) was the State Authority responsible for informal areas in Egypt before 2008, but we must mention that the state land authority in some cases can be governorates, governmental bodies or even private companies. But after 2008, the Informal Settlement Development Facility "ISDF" become the governmental body that responsible for putting upgrading plans for informal areas in Egypt, but currently due to fund and priorities issues all work is dedicated for the unsafe area only, and accordingly GOPP still the administrative body responsible for putting development programs for other informal areas (unplanned areas).

#### **Analyzing Some Statistics/ Characteristics Of Informal Areas In Egypt:**

There is no accurate or consistent data about the exact no. of people live in Egyptian slums areas, consequently, obtaining factual and efficient plans, policies and budgets need precise and cohesive data and information. (Sabry, 2009) Nowadays, not only the poor people who lived in the slums areas, about 17 million Egyptians live in slums areas stated by the governmental authorities. (Shehayeb, 2011) according to a ministry of social development, more than 1100 informal settlements are existing in Egypt; accommodate more than 17 million people (about 25 of total population). (The Cities Alliance, 2008)The population profile implicates a broad spectrum of socio-economic classes, like professionals, employees, doctors, engineers, shops' owners and craftsmen, where the prevalent prototype is the family-owned apartment building. Informal areas have many potentials, such as "self-adequacy" of daily and weekly needs, "walkability", "suitability" and "Homework vicinity", "security" and "precaution of public amenities". (Shehayeb, 2011)

#### **Types Of Informal Areas**

Informal areas can be classified according to the type of land as shown in the following table:

**Table (1)** types of informal areas based on land type

Prior agriculture land comprises informal buildings	Prior desert state land includes informal buildings	Decadent Historic Core	Decadent Urban Pockets
The process in this type happens where former agriculture lands divided into several parts to many buyers, where everyone constructs his private building without building license. (Sims, 2003) In lots of cases, good quality concrete structures are identified, with 3 and above floor height.	This process is called, "Hand claim," where inhabitants have constructed their buildings on vacant state lands, which is similar to the Latin America typology. . (The Cities Alliance, 2008) (Hassan, G. F. 2012)	The medieval urban fabric had an effect on some of old Egyptian cities that characterized by old, deteriorated structures that lead to discomfited ownership. (Sims, 2003)	Problematic land tenure status leads to the presence of these pockets, where poor people who need to the frugal allowable housing

#### **4. PAST INTERVENTION FROM GOVERNMENTAL TOWARDS INFORMAL AREAS (FROM ITS EMERGENCE TILL THE 25TH REVOLUTION)**

##### **Plans Before The Establishing Of ISDF (1970-2008)**

"Site and services" and "settlement upgrading" were two pilot projects that exemplified an extra shift in governmental intervention with slums; those projects were corroborative by World Bank, the Egyptian government, in addition to many international grantees. These projects started in Ismailia, Helwan and Mansheit Nasser districts in (1977-1978-1979) respectively, and then in Nasseriya in Aswan in 1986. (Egyptian Cabinet, 2011).

Before the early 1990s, Informal settlements were usually neglected by public officials. With a lack of government recognition of the Ashwaeyat, as being informal housing that were built in disagreements of the laws of planning and construction.

Providing Urban Services like; electricity, clean water, sanitary, paved road for 325 informal areas besides developing more than 13 deteriorated areas with total cost 3.2 Billion L.E. (Egyptian Cabinet, 2011). Subsequent government interventions were aiming to upgrade informal areas by providing needed services and amenities. However, the provision of infrastructure to the informal settlements had encouraged their growth. Therefore, these areas also suffer from a lack of infrastructure and services, and often from such problems as a high rate of unemployment and illiteracy. In 1996 was the first definition cited in ElShoura report of informal settlement that addressed to the inhabitants as part of the problem and needed an integrated approach combining infrastructural and socio-economic development. In 1997, Hernando De Soto's ILD and ECES conducted a comprehensive multi-year study of informality in Egypt. (Hassan, G. F. 2012)

## **Informal Settlement Development Programs**

### ***First Stage: 1994 - 2004 Informal Settlements Development Program***

Providing Basic Urban Services (electricity, municipal cleanliness, water, sanitary drainage, road paving) for about 325 informal areas and developed 13 deteriorated areas with expenditure total cost 3.2 Billion L.E. (Egyptian Cabinet, 2011). Subsequent government interventions aiming to upgrade informal areas by providing needed services and amenities. However, the provision of infrastructure to the informal settlements had encouraged their growth. Therefore, these areas also suffer from a lack of infrastructure and services, and often from such problems as a high rate of unemployment and illiteracy. In 1996 was the first definition cited in ElShoura report of informal settlement that addressed to the inhabitants as part of the problem and needed an integrated approach combining infrastructural and socio-economic development. In 1997, Hernando De Soto's ILD and ECES conducted a comprehensive multi-year study of informality in Egypt. (Hassan, G. F. 2012)

### ***Second Stage: 2004 - 2008 Informal Settlements Belting Program***

Focus on supporting local government in preparing detailed plans to enable development efforts for restricting the growth of informal areas. (Egyptian Cabinet, 2011). In 2008; The Egyptian government started to incorporate the issues of community participation by the Law 119 of the year 2008. Additionally; the legalization of land tenure of upgrading projects in several areas developed on State-owned land by refunding policies through selling the land to the government. The price of the land fixed per square meter applicable to each zone (ranging from LE 50-200 depending on location). (Madbouly, 2006).

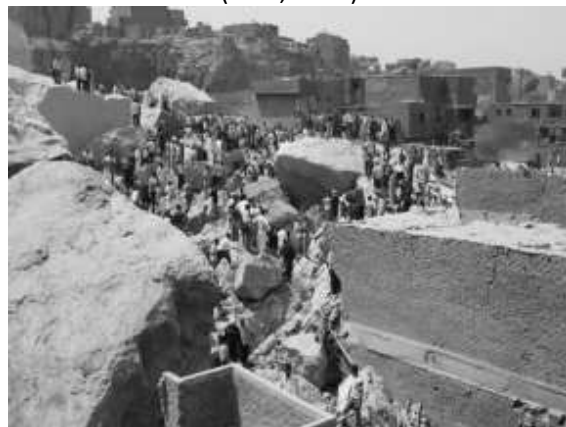
Towards offering credits and microcredit's for poor, The Social Development Fund was established to consolidate this idea. It supports the establishment of small business. It offers many programs performed for youth, women, and poor. On the other hand, the government established The National Committee for Women to defend rights of women, to protect her from violence and to secure social development. (Hassan, G. F. 2012)

## **Plans After The Establishing Of Informal Settlement Development Facility "ISDF"**

### ***History Of Establishing Informal Settlement Development Facility "ISDF"***

In manshiat Naser In September 2008, a large rock fell from a cliff of the mountain, burying some 35 houses beneath. This catastrophe was not the first of its kind, and

**Figure (2)** Manshiat Nasser accident in 2008.  
(ISDF, 2011)







experts are warning that it might happen again. (Gerlach, 2011). Before this accident, Ashwaeyat was classified according to the type of major problems. “Unplanned areas” mainly suffer from narrow streets and lack of BUS; “Unsafe areas” are unsecure for souls of its inhabitants and need to be redeveloped. So the informal settlement development fund “ISDF” was established. (Hassan, G. F. 2012) ISDF has established as a fund to support local government in the provision of safe housing on cost recovery basis. The eradication of Unsafe Areas was the Priority. (Egyptian Cabinet, 2011). Unsafe areas are areas that posing risks to residents, this due to tenure, health or the unsafe houses. These happened due to the buildings experiencing severe deterioration over time, being located in a hazardous site or exposed to the bad health condition such as lack of safe drinking water or basic sanitation. (Khalifa, 2011).

### ***The Informal Settlement Development Facility “ISDF” Strategy And Policy***

ISDF was established In October 2008 by a Presidential Decree # 305/2008 with the primary objective to coordinate all efforts and finance for the development of what were formerly called “Ashwaeyat”. The Egyptian Cabinet directly heads the ISDF. The management board of the ISDF has memberships of; the Minister of Local Development (president) and six Ministries, 53 experts and three representatives from NGOs, civil society organizations, and the private sector. The primary sources of funding for the ISDF are including the national budget, loans, donations, grants and revenues from cost recovery. (Presidential Decree, 2008) To define what is slum areas, the ISDF made a paradigm shift by replacing the term “Slums” or “Informal Settlements” or “Ashwaeyat” by two terms; “Unsafe Areas” and “Unplanned areas”. Unsafe areas are characterized by being subject to life threat, or having inappropriate housing, or exposed to health risk or tenure risks while unplanned areas are principally areas that are known by its noncompliance to planning and building laws and regulations. (Khalifa, 2011).

**Table (3)** difference between unplanned areas – Unsafe area according to the ISDF definition. (ISDF, 2013)

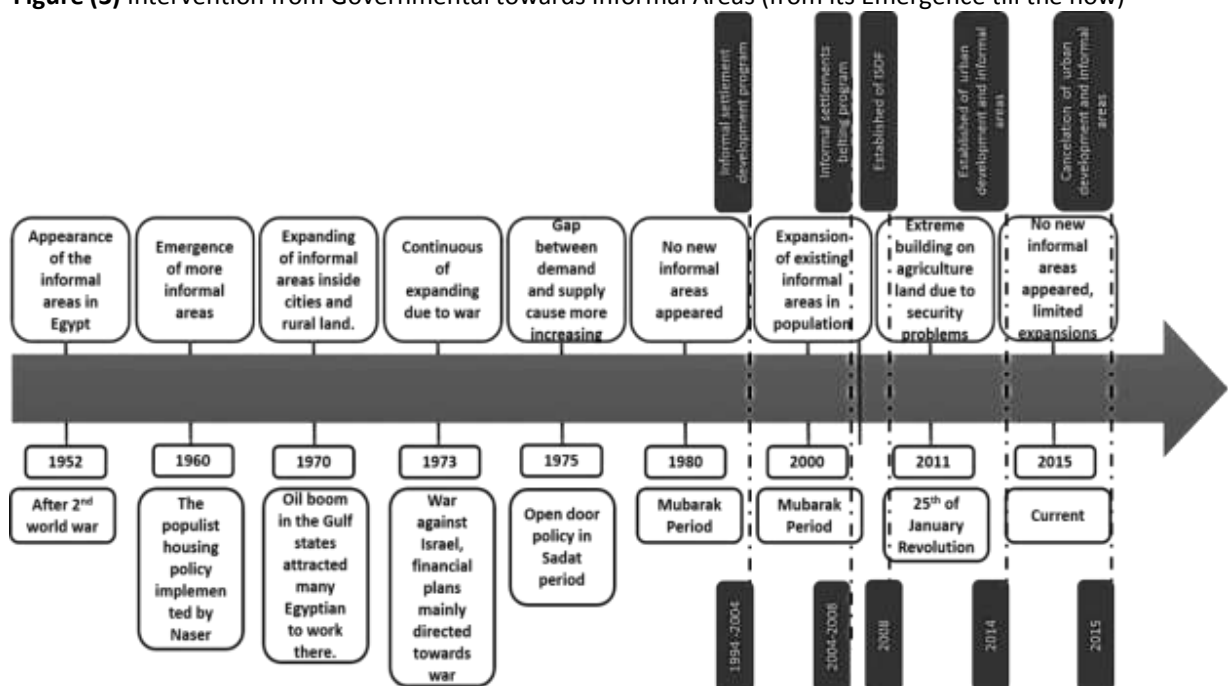
Unplanned area	unsafe area
	
Unplanned areas are 60% of urban areas. Density 500 person/ feddan. Building heights 4-10 floors. Provides optimum level of safe housing. Needs long term development.	Unsafe areas are 1% of urban areas. Density 200 person/ feddan. Building heights 1-2 floors. Doesn't provide safe housing. Needs immediate intervention.

Grades are ordered according to the degree of risk, thus the higher risk overrules the lower. Based on the initial estimates by the ISDF unplanned areas constitute 60% of the total urban area, while unsafe areas constitute 1%. (El-Faramay, 2011). On the other hand, a national strategy was formulated by the Ministry of the housing to define Ways of intervention in existing informal areas and preventing the formation of new informal areas at the same time. The governmental intervention was enabling formal lands for needed housing and services, and social housing that absorb population increase and preventing the informal growth. Even though that there is a conceptual shift in the ways of dealing with “Ashwaeyat” to respond to different incidences, but in fact, governmental intervention in the unplanned area was not varying. (Madbouly & Lashin, 2003)

### The Ministry Of Urban Renewal And Informal Settlements

In 2014, the ministry of urban renewal and informal settlements was established to supervise the ISDF from one hand and also the enhancement and improvement of rundown neighbourhoods with the cleanliness of the city. Unfortunately, this ministry was cancelled in 2015 and nothing recording towards its achievements or work toward the unplanned & unsafe areas in Egypt.

**Figure (3)** Intervention from Governmental towards Informal Areas (from its Emergence till the now)



### Role Of Ngos & Private Organization Towards Informal Areas In Egypt

In Egypt there are various efforts that have been exerted towards promoting the participatory planning approach to the informal areas. These efforts are driven mainly by the international firms such as the UN-Habitat, the GTZ, SIDA, DFID and JICA. These projects are usually being done with the acknowledgment of the cooperation with a

local authority and are implemented through local consultants. There are fewer attempts that have been driven by local initiatives and these are usually not publicly available. (Salheen, 2006). The intervention of unplanned areas was to decrease population density through enlarging roads, provide public transportation and to encourage the contribution of civil society and NGOs to focus on socio-economic needs for developments. (Madbouly & Lashin, 2003)

## **5. CURRENT SITUATION OF INFORMAL AREAS IN EGYPT AFTER THE REVOLUTION:**

### **The Revolution Effect:**

The Egyptian youth played a great role on the 25th January revolution, which has ended by the president, stepped down on 11th February 2011. One of the most noticed things in this revolution that it was done by Egyptians from different backgrounds, ages, education, and gender. They shared one dream; to enhance their living conditions, living in dignity and feel freedom. The revolution effect echoed everywhere, all the people got involved in a way or another in rebuilding Egypt with a motive of shaping their future differently. As we are now practicing the democracy for the first time, some Egyptians think that making demonstrations in every field or areas complaining from certain issue is the democracy, but in fact the solution of our problems won't come by that way, we need people to work together to understand their role in building their new community. It is expected now from everyone to share in building Egypt including with them the residents of the informal areas which represent the high percent of whole Egypt's population.

### **Community Perspective Towards Residents Of Unplanned Or Unsafe Areas "Ashwaeyat"**

Inherited generations of Egyptian look bad for the people of the informal areas, accusing them of crime, most of them are "Baltagy" and this is what emerged clearly during the Egyptian revolution and what happened during clashes in some times, as the state media try to convince the public that the cause of these clashes is the population of the neighbouring informal areas. Even if those residents of informal areas make a lot of protest marches prove that they are not the instigators in any way in these actions. In fact, those people are everywhere, as mentioned above that the total informal settlement in Egypt (unplanned – unsafe) represent almost 65% of the urban areas in Egypt. That means that they are everywhere, we cannot neglect them anymore and we must stop marginalizing them, because they are a fact and we must involve them in the community, as well as sharing them in the democracy process.

### **Situation Of Informal Areas After The Revolution (Negative – Positive Impacts)**

As informal areas in Egypt is illegal buildings that were built without any license and rarely the police were represented there, additionally to this situation the 25th revolution played a role in breaking the barrier between the government and people, before the revolution people think that they are against law and the police or any governmental body is their enemy and they are going to arrest them.

But as mentioned that; the revolution helped in changing this perception or by another word it empowering the residents of the informal area in a way or another. This strange situation that happened after the revolution helped in creating new problems in these areas besides some positive points that will be mentioned in the next part.

#### ***Negative Impacts Of The Revolution:***

One of the major negative impacts of the revolution is the security issue, as after the struggling of the police power people change their attitude and now they are not afraid of this body. As an impact, many crimes appeared in that area, from kidnaping, drug dealers and other crimes. And people had to secure themselves by themselves. This situation didn't stop till now, because the power of police to enter those areas is now very small, and people are not afraid from police as they were.

Another negative impact of the revolution is the growing in the construction of informal housing more and more in urban and in rural areas. People use the transition period that the country passing through to build more illegal housing very fast. And the result is more informal buildings that have minimum access to infrastructure, have a problem in the air supply and sun for the dwelling.

As a result of this uncontrolled increase in the informal housing in those areas, many other problems appeared like building in agriculture lands that has increased rapidly after the revolution besides putting the government in a great challenge in the coming future because of all this illegal housing.

Beside all the above problems; unplanned markets appeared everywhere not only in informal areas but in many other areas in Egypt. But the main problem in those informal markets that there is no control or monitoring by the governorate on them after the revolution and they grow day after day despite of some efforts from the ISDF to survey this illegal markets.

#### ***Positive Impacts Of The Revolution:***

"Urban governance can be defined as the sum of the many ways individuals and institutions, public and private, plan and manage the common affairs of the city. It is a continuing process through which conflicting or diverse interests may be accommodated and cooperative action can be taken. It includes formal institutions as well as informal arrangements and the social capital of citizens" (UNDP, 2010).

One of the most noticed things after the revolution is the empowerment of residents at the expense of the governmental bodies. Based on this; the definition of the governance is now redlined again and accordingly will change as the people expected to play a great role in their future and not just watching what other doing with their life. Validating the meaning of governance is one of the aims of the 25th revolution and must be implemented with the help of people that more and more now regaining their right and have equal opportunities.

#### **Change In Democratic Life & Its Impact On Any Future Intervention In Informal Areas**

Egyptians participated in two elections after the revolution which informal areas

present a large percentage, residents of the informal area know now that they are like other Egyptian citizens that have rights and present a vote. This echoed in the real by stopping of one of the major plans in Egypt which is the Cairo2050 development plan that prepared by the GOPP before the revolution. The stopping of this plan because it continue a scenario of changing the look of Cairo city in the coming future to be a competitive city, and in order to do that many informal areas were suggested to be removed. This investment approach was done away from people or the residents of the area. As an impact of the revolution, this plan stopped because people who demonstrate to change their life to the better will not accept strangers to move them again and play with their life. The same problem happened in other plans like Maspero development project and Embaba development project. One of them stopped and other struggled due to people opposition of the project.

The main problem before the revolution is that participation might be carried in some development or re-planning projects, but the representative of public in this participation were from NGOs that by some way or another follow the old regime and of course it looked for the benefit of the government instead of the local people , other problem that in some of this projects no public participation were done at all, and the third type that the solutions that are offered for the residents of this area were not enough and didn't match their expectation so they came back after leaving their informal area.

People in informal areas were taking care of themselves, and this includes schooling, healthcare, food supply, and social services. People there know what needs to be done to better their community, but there are no channels for them to take part officially in civil society and government. Although this area is part of the country nothing has improved in those areas till now. Residents are avoiding governmental institutions and not considering them as window an efficient mechanism to better their lives. After the revolution this situation increased and people there put their eyes on the representative of the parliament which is for them owning the magic stick that can change their coming future, and this is another problem in those are.

### **Many Efforts Of Upgrading But No Impact:**

As mentioned above people in informal areas are now empowering day after day from one hand and from other hand the government till now didn't find new techniques for future intervention in those area and leave to NGOs, and nongovernmental bodies to solve this dilemma. Some residents of those feel that they have been a case study for years and nothing really changed their level of life or enhanced their community. They waited for ages and now after the revolution they are searching for a fast intervention and fast impact on their life, and currently the ISDF is working only on the unsafe areas leaving the unplanned areas which represent 60 percent of the whole informal areas without any intervention. Also as an impact of the revolution the government allows for the private campaigns or NGOs to develop those areas or collect money for them (like the milliard campaign of Mohamed Sobhy which is aiming to collect donations nationally & internationally for the upgrading of the informal areas). But all this effort doesn't have

any deep impact on most of those areas till now, and people there till now still find solutions for their problems alone despite some help they got from parliament representative towards supplying some missing essential goods.

## **6. CONCLUSIONS & RECOMMENDATION**

The annual housing need of limited-income groups in urban areas is conservatively estimated between 165,000 and 197,000 units. The National Housing Program (NHP), with its pledge of 85,000 units per year, would thus cover almost 50 percent of the estimated need. Beside that many laws and decree since the 60s till now directly caused the growth of “Ashwaeyat” in Egypt. The rental control law, before 1967, that freeze housing rent to ensure affordability, caused the withdrawal of Private sector from the housing market, resulting in the long-run in a deficit in housing stock mainly for lower-income groups. (Hassan, 2011). The old housing policies from the 1950s till the 1970s had led to the housing shortage, and the exacerbation of informal housing, land speculation in urban areas combined with the lack of access to State land by different low-income segments, reluctance to register real estate or housing properties and lack of financial resources for housing development.

While In the 80s to the early 2000s emerged the concept of directing population growth to the desert outside Nile valley, the government decided to locate subsidized affordable housing to low-income groups only in these new cities. This was part of the problem, as people were moved from their areas inside the city to outside the city without any respect to the location of their job and the additional cost they will pay in transportation besides other social problems like the feeling that there are not belonging to the new city and their relations, family and friends are there, and they are moved with an order from the government without any kind of participation in the decision-making process.

After the January 2011 revolution, practically all controls over informal construction completely dissolved. As a result, informal areas all around Greater Cairo have enjoyed a building boom, with new buildings rapidly being constructed and more floors added to existing structures. Should this trend continue (and there is no reason why it should not), the rate of absorption of greater Cairo's additional population into informal areas will be increased even more; probably exceeding 80 percent of all population increase (Sims, 2011). While private sector and NGOs interventions are generally limited to social charity actions, and temporary donations. The main problem facing this type of intervention is the lack of coordination and integration of efforts done and the lack of visioning for combining objectives and the lack of the clear identification of roles for each partner of upgrading in such areas (Hassan, G. F. 2012).

While many problems in informal areas could be solved by informed intervention and political will, the challenge still remains of stopping such settlements from growing up in other, inappropriate locations, without the necessary guidance and regulation. (Shehayeb, 2011)

The solution is the gather all efforts that done by governmental bodies and non-

governmental bodies in one body responsible of upgrading those areas, and there must be a real cooperation between residents of this area and this body, they must share in putting the development plans and share in its implementation. People there are succeed from the beginning to build their own community without any help from the government and now the need help to develop their areas and make it a better place for living. This action is a must now especially after the revolution in order not to have another revolution that may happened from those people if they feel that they are still marginalized and didn't gain any benefits after the revolution.

This paper recommends that making people participate in putting the coming development plans of their areas, not the perfect step only, but letting them share in building their community by their hands is the needed one. Teaching those people simple building techniques, make them responsible for cleaning their areas by themselves, and even encourage them to donate for their area's upgrading even with small amounts of money. The idea is to change their perception from being marginalized to being involved and effective part in the Egyptian community. Transforming these informal areas from social disease carrier to creative communities is the solution.

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# **Towards A System Of Integrated Policies To Deal With The Urban Sprawl Areas In Large Egyptian Cities**

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## **ABSTRACT**

Urban sprawl is considered a global phenomenon, though it varies in its severity from one country to another. This phenomenon reflects positive effects on life and development, but at the same time, it reflects a negative impact on various economic and social aspects.

In the Arab Republic of Egypt, the population pressure on the urban centers during the past years led to an increase in the urban sprawl areas towards the agricultural land that surround cities, which devoured more than 1.5 million acres for the urban and rural extensions until now, and still devour more than 60 thousand acres per year.

The study discusses the absence of an integrated system that deals with the urban sprawl areas in the preparation project of the urban strategic plans for cities, which leads to the neglect and lack of implementation of the detailed plans for these areas.

This study addresses the concept of urban sprawl phenomenon, and its most important problems at the global, Arab and local levels. The first part discusses the problem of urban sprawl areas in the Egyptian cities, and presents an analytical study of some of the Large Egyptian cities (more than 100 thousand people), which indicates the most important features of the urban Structure of the Egyptian cities, the most important attraction factors and trends of urban sprawl. And this part discusses the most important consequences resulting from the urban sprawl of the Egyptian cities, The second part discusses the reality of urban sprawl and its sustainability in the national strategic plans project of the Egyptian cities in terms of challenges and opportunities to deal with.

The study concluded to propose a vision for the formulation of integrated policies, at the national, regional and local levels, to deal with the urban sprawl areas in the Large Egyptian cities (more than 100 thousand people) within the framework of the preparation of general and detailed strategic plans of the Egyptian cities.

**KEY WORDS:** *Urban sprawl, urbanization, urban growth, the protection of agricultural land, Egyptian cities.*

## **ملخص البحث**

يمثل التوسع الحضري ظاهرة عالمية وإن كانت حدثها تختلف من دولة لأخرى، وتعكس هذه الظاهرة أثاراً إيجابية على حركة الحياة والتطور ولكنها في نفس الوقت تعكس أثاراً سلبية على مختلف الجوانب الاقتصادية والاجتماعية. وفي جمهورية مصر العربية، أدى الضغط السكاني على المراكز الحضرية خلال السنوات الماضية إلى تزايد الامتدادات العمرانية نحو الأراضي الزراعية المحيطة بالمدن فالتهمت الامتدادات الحضرية- والريفية أيضاً- مايزيد على ١,٥ مليون فدان ومازالت تلتهم سنوياً مايزيد على ٦٠ ألف فدان.

وتتمثل فرضية الدراسة في عدم وجود منظومة متكاملة للتعامل مع مناطق التوسع الحضري بالمدن المصرية ضمن مشروع إعداد المخططات الاستراتيجية العمرانية للمدن، مما يعرض المخططات التفصيلية لتلك المناطق إلى الإهمال وعدم التنفيذ.

وتتناول الورقة البحثية ظاهرة التوسع الحضري من حيث المفهوم، وأهم مشاكلها على المستوى العالمي والعربي والمحلي ويتناول القسم الأول إشكالية التوسع الحضري في مصر ودراسة تحليلية لبعض المدن المصرية الكبرى (١٠٠ ألف نسمة فأكثر) لاستقراء أهم ملامح الهيكل العمراني للمدينة المصرية وأهم عناصر جذب واتجاهات التوسع الحضري للمدينة، وأهم التداعيات الناتجة عن التوسع الحضري للمدن، ثم يتبعه القسم الثاني من البحث ليتناول واقع التوسع الحضري واستدامته في إطار المشروع القومي لإعداد المخططات الاستراتيجية للمدن المصرية من حيث التحديات والفرص للتعامل معه.

وخلصت الدراسة إلى اقتراح رؤية لصياغة منظومة السياسات المتكاملة على المستوى القومي والإقليمي والمحلي للتعامل مع مناطق التوسع

الحضرى بالمدن المصرية الكبرى (١٠٠ ألف نسمة فأكثر) فى إطار إعداد المخططات الاستراتيجية العامة والتفصيلية للمدن المصرية.  
الكلمات المفتاحية: التوسع الحضرى - التوسع العمرانى - النمو العمرانى - حماية الأراضى الزراعية - المدن المصرية.

## INTRODUCTION

The phenomenon of urban sprawl of cities has emerged to existence due to increased urbanization, despite its differences from one era to another. The urban sprawl is not limited to a group of countries, but it is considered a general situation in all countries. There are several natural and human factors which contributed in the sprawl phenomenon. There are plenty of ways to define urban sprawl. Although it is hard to give an exact definition about what it actually is, I would like to find a general idea in order to get a conceptual understanding towards this definition.

The phenomenon of urbanization is considered as one of the features of social change that characterized the twentieth century in most of the developed and developing countries. Such changes have affected the individuals and societies in different ways [1]. The phenomenon of cities growth is steadily increasing, so the urban population growth rate exceeds the population growth rate [2].

Herper and Gottman defined the urban sprawl process by spread and extension outside the borders of the city without adhering to the limits of the areas where this process has occurred [3].

The urban sprawl is known as continuous increase in the population, whether in planned or unplanned housing, which increases the demand of agricultural land, which creates environmental imbalance [4].

Several studies revealed that urbanization in cities of developing countries is happening in a quantitative rather than a qualitative manner; as there is increasing urban population without a real transformation in lifestyle and behavioural patterns that is associated with life in the cities which is known as Urbanism [5].

Between 2000 and 2030, the world's urban population is expected to increase by 72%, while the built-up areas of cities of 100,000 people or more could increase by 175%. In the developing countries, cities of 100,000 or more are expected to triple their built-up land area to 600,000 km<sup>2</sup> in the first three decades of this century. Cities in developed countries expand at an even faster rate per resident, despite their smaller population size and lower rate of population growth. They will increase their built-up land area by 2.5 times between 2000 and 2030. At that point, they will occupy some 500,000 km<sup>2</sup> [6]. The Arab region contains the oldest civilizations in the world, as well as, one of the most urbanized regions too. The total population in Arab countries reached about 357 million people in 2010, including 56 % of the urban population; however, these rates will continue to grow, so as to reach approximately 646 million by 2050, including 68 % of urban population.

Additionally, Arab countries recorded a population growth in the cities in 2010, which exceeded four times the growth rates recorded in 1970. In addition, these rates will grow more than the double during the period between 2010 and 2050. It was observed emergence most of the growth operations that have been recorded up to the present in

the areas surrounding large cities of the Arab countries, in spite of the medium and secondary cities recorded faster growth rates at present [7].

Development projects and programs in the Arab world failed to achieve their goals and plans that were set to reduce the phenomenon of expansion of cities for many reasons, including [8]:

- The increasing population growth of cities, due to the natural increase in birth rates, low mortality rates, the ongoing migration from the countryside or international immigration, so cities are growing significantly in a short period and large cities get larger.
- Centralization of urban functions and loss of medium and small cities and decrease its importance so they fail to perform their role in urban development.
- Lack of organizational and administrative structures to attract qualified people and make the administrative organization incapable of solving the growth problems.
- Lack of clear policies for the use of land within cities and they are affected by the interests of powerful economic groups.
- Absence of cooperation, coordination and integration in the programs carried out by various administrative and economic organizations.
- Failure to follow a clear policy in the recruitment of scientific experiences to work in different areas of the country.

"The urban Egyptian Growth rates did not only exceeds its counterparts in the developed countries during the urban revolution in the eighteenth and nineteenth century, but also exceeded the rates of the developing countries itself. For example, during the period between 1950 and 1990, the cities of the developed countries have doubled only once from 450 million to 900 million, while the cities of the developing countries have increased four times from 285 million to 1.15 billion, and the Egyptian cities have increased during the same period four times and a half from 6.4 million to 27.00 million"[9].

## **PART I THE URBAN SPRAWL OF THE LARGE EGYPTIAN CITIES**

### **1.1 The Problem Of Urban Sprawl**

Egyptian cities constituted the centres for non-agricultural activities such as trade, as well as, for administrative, religious and military institutions that were required for the emergence of the regions, then the country. These urban settlements has begun on the sides of the River Nile and its branches, because it was the major artery for transport, it has contributed, more than any other factor, to link these urban settlements with each other and with the capitals of provinces and the National Capital.

- "Whereas, there was a population explosion in the last fifty years of the twentieth century, also there was "an urban explosion". Cities have extended in every direction and swept on its way all the attempts of guidance or containment. This extension was planned only in few areas. Residential and non-residential activities were mixed randomly, which ultimately led to the urban and architectural deformation of the modern Egyptian city. The rivers, railways and regional roads represent the

determinants of urban growth in the valley and the delta cities, but soon it extended in the direction of "least resistance" towards the agricultural lands which surround the cities, so the urban and rural sprawl devoured more than 1.5 million acres and still devour 60 thousand acres per year. This sprawl also moved towards the desert parts of the cities such as Cairo. The sprawl has radial or ring shape in most cities of the valley and Delta, and has linear shape in some other cities, such as Alexandria, Port Said and Aswan. It has increased during the second half of the twentieth century four times the urban built-up area of the city."[10].

There are factors other than the population growth that led to the urban sprawl, the most important of which is the state policy by the development of new residential districts in, or near, agricultural lands, also the financial factor which tempts the agricultural land owners to use these lands for non-agricultural purposes. Also, social factors play a prominent role through the desire of some urban residents to live in suburbs of the city, so they transfer some agricultural land to residential land only without the benefit of it in agriculture [11].

- At the beginning of the twentieth century in 1907, the number of large cities (more than 100 thousand people) was only two cities, Cairo and Alexandria; and in the middle of the century, the number of large cities rose to be 7 cities, then rose to be 15 in 1960, 20 in 1976 and 27 in 1996; as well as, in the population census of 2006 reached 44 city. Cities began to enlarge leading to accumulation of the population, where in the period between 1907 – 2006, the number of cities (less than 25,000) increased from 17 to 68 cities, and the number of medium-sized cities (25,000-100,000 people) from 4 to 121 cities in census of 2006.

## 1.2 Methodology

In this part of the study, the most important features of the Urban Structure of Egyptian city will be discussed, as well as, the most important attraction factors of urban sprawl and its trends, and the most important consequences resulting from the urban sprawl of the cities.

The study methodology is based on selecting the Large Egyptian cities (more than 100 thousand people) and excluding cities of millions due to its privacy and limitations (4 cities), where the number of cities in this case are 40 cities that represent 17.2% of total Egyptian cities, and its total population amounted 9.4 million people, 30.6% of total urban population of Egypt (census 2006). Table (1) refers to the number of population distribution of Egyptian cities (census 2006).

**Table (1)** The number and population distribution of Egyptian cities (census 2006)

Categories of cities (1000 people)	Total cities	%	The total urban population in Categories (people)	%
Cities of Million	4	1.7	14530009	46.3
500 - 1000	3	1.3	2064175	6.6
250 - 500	10	4.3	3482380	11.1
100 -250	27	11.6	4038091	12.9
50 - 100	56	24.0	3903087	12.4
25 - 50	65	27.9	2468619	7.9

10 - 25	45	19.3	806267	2.6
< 10	23	9.9	78297	0.2
Total	233	100	31370925	100

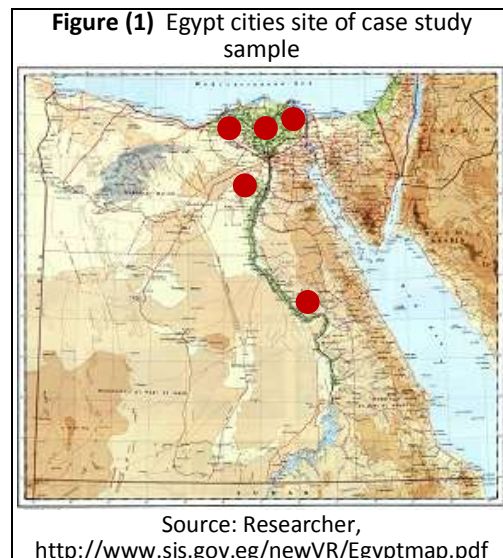
Source: Researcher- From final results of Central Agency for Public Mobilization and Statistics -2009.

The study based on selecting a sample of five cities (see Figure (1)) that represent the case study of the cities in that category in particular and the Egyptian city in general, in accordance with the following criteria:

- Governorates capitals (19 cities of more than 100 thousand people).
- The geographical representation of Egypt (Lower Egypt - Upper Egypt), excluding the capitals of some of desert governorates like Arish, Kharga and Hurghada in that category in census 2006.
- The preparation studies of general and detailed strategic plans of these cities.

The five cities (selected case study sample) are three cities of Lower Egypt (Zagazig in Al Sharqia Governorate, Shebein El Kawm in Munufiyya Governorate, and Damanhour in Beheira Governorate), and two cities in Upper Egypt (Fayoum city in Fayoum Governorate, Qena city in Qena Governorate). It will discuss the features and characteristics of the Urban Structure of these cities. The case study sample is represented in three main points as follows:

- The most important features of urban structure of the city (including distribution of land uses, building heights, building situations, building construction and urban pattern), and the gross and net population density.
- The most important attraction elements of urban sprawl and its trends in the city.
- The most important consequences of urban sprawl of the city.



### 1.3 Analytical Study Of The Case Study Cities

#### 1.3.1 The most important features of the Urban Structure

The most important features and characteristics of the Urban Structure of Large Egyptian cities (more than 100 thousand people), case study cities, table (2), are identified as follows:

- The urban built-up area in cities is ranging from 2012 - 3230 acres with an average of 2366 acres, with per capita rate between 27.0 - 49.0 m<sup>2</sup>( average 41.6 m<sup>2</sup>), which is relatively a good rate.

- By analysis of land use budget for these cities, it was clear that residential uses rate is between 33.3 - 40.7% with an average of 40.7% of total urban built-up area of the city which is considered acceptable compared to similar Egyptian cities, this is due to several reasons, including high rate of road network, urban spaces, agricultural pockets and regional uses of the city. However, it ranges between 63.3 - 87.0%, and with an average 75.3% of total built-up area, and the public services area is between 7.2 - 11.7%, with an average of 9.8%, while the industrial activities is between 0.7- 6.4%, with an average 3.4%, and regional uses is between 4.5 - 8.9%, with an average 6.3%, as well as, roads and general spaces of the city is between 19.1- 34.1%,with an average 28.1% of total urban built-up area of the city. The general features of land use of the case study cities- figure (2)- are characterized by the following:

- Lack of a specific pattern of land use distribution for different parts of the city, particularly commercial use.
- Concentration of the main and regional services at the entrance of cities and the peripheral parts.
- Emergence of slum areas, particularly in the last four decades of the city's growth, and lack of urban control.
- Presence of some of the inappropriate (non-urban) uses such as cemeteries, prison, slaughterhouse, etc. in distinguished locations in the old city, which decreases the value of land, especially the city centre close to service areas.
- Existence of the Nile and main canals as functional axis which passes in the city centre, links between the two parts of the main city, exploits parts of it as park and provides open green areas.
- The relative rise in the roads network area and spaces in the city.

- For the built-up area of the city is between 790 - 1483 acres with an average 1146 acres, ranging between 38.8 - 64.3%, and with an average 48.4% of the total urban built-up area of the city.

- The building heights in the city, are mostly low and medium, ranging between one and two floor by 26.7- 45.3%, and with an average 38.7% of the total building area of the city, which generally spread in the old areas and in areas that take rural character, that were separate in the form of small rural communities before they enter the cordon of the city. Medium-rise buildings are ranging between 3-5 floors by 41.5 - 64.9%, and with an average 49.5% of the total area of the city buildings. The high-rise buildings (more than 5 floors) and the medium-rise buildings are spread in most regions of the sprawl in different parts of the city and on the main roads.

- The situation of buildings in the city, the buildings area with good situation ranges between 33.8- 86.7%, with an average 59.7% of the total area of the city buildings, and the buildings with medium situation are between 13.4 - 49.6%, and an average of 33.8% of the total area of the city buildings, while bad buildings area ranging

between 4.7 – 22.0%, and an average of 11.7% of the total area of the city buildings, which are concentrated in the old area of the city and in villages adjacent to the urban built-up area of the city that has rural nature, and on the margins of the city, while good buildings are concentrated in the areas of modern sprawl.

**Table (2)** Features of the urban structure of Large Egyptian cities(case study cities)

City		Zagazig	Shebein El Kawm	Damanhour	Fayoum	Sohag
Governorate		Al Sharqia	Menoufia	Beheira	Fayoum	Sohag
Geographical location		Lower Egypt			Upper Egypt	
The population in census 2006 (people)*		302840	177112	244043	315940	193168
Total urban built-up area(acres)		3229.79	2012.0	2304.1	2035.0	2251.85
Per capita average in urban built-up area(m <sup>2</sup> /person)		44.79	47.71	39.65	27.05	48.96
Urban growth (1986-2006)	Urban built-up area in 1986 (acres)	2106.38	788.6	1661	1670.62	1963.32
	The growth rate (acre/year)	56.17	61.17	32.16	18.22	14.43
	Size growth	1.53	2.55	1.39	1.22	1.15
Land uses (urban built-up area %)	Housing	39.22	33.29	40.76	39.10	37.4
	Public services	7.24	11.67	9.67	11.1	9.43
	Industrial activities	2.29	6.4	0.74	1.51	6.15
	Space land & agricultural pockets	10.75	14.91	8.01	7.51	10.67
	Regional activities	4.54	8.83	4.97	8.91	4.50
	Others	5.67	5.77	1.72	3.85	2.86
built-up area	Roads and public spaces	30.29	19.14	34.12	28.01	28.99
	The area (acres)	1456.2	885.84	1482.6	789.99	1117.0
Building heights	%Total urban built-up area	45.09	44.03	64.35	38.82	49.6
	1-2 Floor	%	26.67	33.46	43.14	45.10
	3-5 Floor		64.91	44.49	41.47	50.02
Buildings situations	More than 5 Floor		8.42	22.04	15.39	4.68
	Good	%	86.66	56.38	67.8	54.63
	Medium		13.39	34.95	26.29	44.6
Building construction style	Bad		0.44	8.67	5.91	0.77
	Structural	%	87.26	50.50	62.99	66.24
	Carrying walls		11.46	47.07	36.99	33.74
	Mud / Adobe		1.27	2.43	0.02	0.02
Population density (person / acre)	gross (Population / urban built-up area)	94	88	106	155	86
	Net (population / residential area)	239	264	260	397	229

\* Central Agency for Public Mobilization and Statistics, General Census of Population and installations in 2006.

Source: Researcher, from data reports of preparation general strategic plan for Egyptian cities project - General Organization For Physical planning, 2009.

- For the construction method of buildings in the city, structural buildings in the city ranging between 50.5- 87.2%, with an average of 68.2% of the total building area of the city. The percentage of buildings which are built-up by adobe ranges between 0.02- 2.4% with an average of 1.0% of the total building area of the city, but buildings built-up by bearing walls ranging between 24.9 - 47.0%, with an average of 30.8% of the total

buildings area of the city, due to the availability of red brick at cheap prices as a result of earthmoving work and brick kilns in the governorate.

-The urban pattern of cities was found complex and did not belong to the main planning trends for urban cities, so they are not in the form of grid, linear or central cities, but it has a multi-pattern of different types. The agricultural areas in the urban sprawl areas of the city have a great impact on this conflict which was the obvious feature of the urban fabric. As a result of economic factors and the varying level of the population in this regard, the construction materials, building heights and land use have varied. As we move to the periphery, the urban growth was more modern and has new urban patterns in buildings. The roads have had a role in attracting this urbanization, so the urbanization seems to be in line with the modern streets and roads that enter and exit the city, so they act as arms extending from the original urban fabric.

- Finally, the average gross population density, it ranges between 86-155 persons / acre, with an average of 106 persons / acre, which is consider low density due to the relatively large empty land, regional services, and road network in the city, but the net population density (population / residential area) is relatively high, ranging between 229-397 person / acre, with an average of 278 persons / acre.

### **1.3.2 Trends and attraction factors of urban sprawl**

Through the study of development stages of urban growth for the Large Egyptian cities, case study cities, which are located in the middle of fertile agricultural land like any other town in the Delta and the Nile Valley, we can conclude that the Egyptian city grew in all directions, so urban built-up area overlaps the surrounding agricultural land, where there are planted areas in many places within the urban built-up area, which threaten agriculture directly. It is noticeable that this urban sprawl had been remarkable only during the last three decades, where urban growth rate of the case study cities during the period 1986 – 2006, ranged between 14.4 - 61.1 acre / year, with average of 36.4 acre / year, and the increase of the urban built-up area ranged between 1.1 - 2.6 times with an average of 1.6 times during the same time period, which was relatively higher in Lower Egypt cities compared to the Upper Egypt cities, as shown in table (2).

We can identify the most important factors to attract urban sprawl in case study cities as follows:

- Administrative adjustments: such as converting Shebein El Kawm from an ordinary city to the capital. Its impact appears in the development and growth of the city in all directions, because this was followed by the establishment and concentration of administrative services, as well as the establishment of various health, educational and cultural services, thus attracts the population from all aspects. In addition to, the inclusion of some villages such as Mitkhakan and Kafr Meselha to Shebein El Kawm city as an expansion of its vital urban field, so buildings extended to the agricultural land that was separating those villages and Shebein El Kawm city leading to an overlap of the construction of the city with these villages in a short period.
- Urban and natural axes: the urban axes are represented in contact and transportation including roads and railways such as Cairo- Alexandria agricultural road, Cairo- Alexandria railway, and Bahr Shebein. It is considered an important



factor for connecting the city to other cities economically and socially. As well as military and security areas and cemeteries. The natural axes are represented in waterways such as the Nile River, canals, main drains, flood outlet in Qena, contour lines (in Shibein El Kawm), and agricultural land surrounding the urban built-up area. The urban and natural axes have played an important role in guiding urban development of the Egyptian city, leading to new activities and uses of lands whether residential, commercial or administrative.

- Regional services and new development projects: such as the university, stadium, hospital, spinning & weaving factory... etc, which have a clear impact on attracting employment, revive economic life in the city and helped to attract and grow urbanization, because it attracts many of the activities that integrate with it, rises the value of the land adjacent to it, and increased traffic density on the roads leading to it.

Urban growth rates and trends can be divided into three categories as follows:

a- Rapid urban growth axes: this growth is represented in the direction of the concentration of regional services in general, such as: Educational services (universities, technical schools), some administrative services (electricity administration - traffic department), some recreational services (stadium and social club), and around the axes of the regional transportation and main waterways (river, canal).

b- Medium urban growth axes: represented in the central areas of the city in the presence of land division projects, government housing projects or some local services (mosque, shops, schools, ... etc).

c- Low urban growth axes: represented in the direction of villages which are semi-connected with the city or around the ancient tombs of the city, as well as, the presence of the industrial zone. These sprawls lack importance and usually take random character. And the urban pattern of these sprawls is grid and semi-urban in the periphery of the city.

### **1.3.3 Consequences of urban sprawl**

The random extensions in the periphery of case study cities and the continuous increase in the population densities associated with the rapid urban growth aggravated the problems faced by these urban centers to the degree that temporary solutions and partial repair failed to eradicate its causes in Egypt during the past three decades, which had a range of consequences, including:

- Rapid urban growth and encroachment on agricultural land surrounding the city that was represented in:

- Unplanned random urban sprawl, that caused suffering from a decline in the supply of utilities, health and education services, and the lack of correlation of its urban structure with other main urban parts of the city, which was able to accommodate times the number of the population, if it was pre-planned.
- Overlap with the surrounding villages of the city, as a result of its rapid growth and overlap of the rural pattern with the urban pattern due to the existence of

some rural areas within the urban built-up area (Dar El Ramad, El Alawi and Qahafa in Fayoum). These zones are characterized by internal contrast between it and its neighbouring zones in terms of the nature of the urban pattern, which could be called random rural zones. The majority of buildings in these zones consist of one or two floors which are built by adobe stones in a deteriorated state which is a reflection of the social and economic conditions and the way of life in these zones.

- Waste and Pressure on public facilities. The unplanned housing areas get basic facilities like water and electricity, through the illegal use of the existing networks in the planned areas; leading to high wastage of water and electricity networks, which needs double the cost compared to the cost of delivered services to the planned areas.

- The unplanned construction is a real estate wealth. In the absence of law that regulates these assets, this wealth is considered a restricted capital from participating in the economic activity.

- Weak capacity to provide emergency services in the unplanned housing areas; due to the narrow streets and the cohesion of the buildings that cause difficult access to the ambulance, fire and security services.

- Deformation of the civilized face of the Egyptian society; as a result of the mixing of urban and architectural patterns between urban and rural areas "[12].

- Regional land use interfering with urban built-up area: such as the prison in Fayoum, cemeteries, slaughterhouse, barns, stores or military areas, or its presence in strategic areas on the main axes and adjacent to the residential areas, increasing the environmental problems (pollution and noise - reducing the efficiency of traffic in the city).

- Industrial uses within the urban built-up area: This leads to unwanted environmental pollution.

- Pollution of uncovered waterways and the surrounding areas and using them to get rid of waste and garbage.

- Breakthrough of urban built-up area by the regional roads, railways or waterways, dividing the city into two parts that caused a lot of traffic problems (traffic nodes) and environmental problems (noise and pollution).

## **PART II BETWEEN THE REALITY OF THE URBAN SPRAWL AND ITS SUSTAINABILITY IN THE LARGE EGYPTIAN CITIES**

The second part discuss the government efforts dealing with the urban sprawl in the framework of the national project preparation for the general and detailed strategic plans of the Egyptian cities, and analyze the reality of urban sprawl in terms of challenges and opportunities to deal with. It concluded a vision to formulate integrated policies to deal with the urban sprawl areas in Egyptian cities.

### **2.1 Government Efforts To Deal With The Urban Sprawl**

The government has launched the national project for the preparation of the general and detailed strategic plans of the Egyptian cities (225 cities) [13], through

"participatory planning" methodology, to achieve the competitiveness of the city and formulate its future vision. The most important outputs of the first phase of the project include: the proposed urban border of the city until 2027, identify activities and needs (housing, public services, economic activities, infrastructure) to the expected number of population in the target year, and localization of activities and priority projects in the various sectors, in addition to descriptive supplements of those activities and projects, the cost, participant and the institutional work plan. The second phase comes considering outputs of the general strategic plan as the basic information to prepare detailed urban plans for the development of sprawl areas, and the land adjacent to the slum areas in the periphery of the city within the approved urban border of the city until 2027- figure (3), to ensure its growth in a planned shape instead of its random expansion, including (land use, housing, services, activities, the proposed projects, road network, development controls, planning and building requirements).

## **2.2 Analysis Of The Challenges And Opportunities Of The Urban Sprawl Planning**

We can address the challenges and opportunities of the urban sprawl planning in case study cities- as follows:

### **First: The challenges**

The challenges dealing with the urban sprawl planning of the case study cities, lie in the following considerations:

- Multiple and overlapping laws that lack integration with respect to urban management of the city and do not encourage land use for suitable public purposes and services.
- Lack of coordination between the various authorities which are responsible for urban management, lack of domestic financial resources, and the weakness of the capacities and qualifications of workers in local administration.
- Lack of information and accurate inventory of public and private properties (Tenure) of lands.
- Refrain from land and buildings registration because of its lengthy procedures and high registration fees, and this leads to lack of proof of ownership at the local administration for the urban management of the city.
- The long duration required for the adoption of the plans and budgets which confirms the necessity of activating participation of the society, the private sector, together with the non-governmental and community organizations and the reliance on self-potentials.
- The lack of large areas of land of public and government ownership due to fragmenting the ownership into small areas.
- Inconsistency in the distribution of current public services with the urban built-up area growth in all directions randomly.
- The lack of most existing services to cover current needs, as well as the future needs of the city.
- The existence of slums areas which are characterized by bad status of the building, insufficient maintenance and the lack of various services and facilities

(water, drainage, services ...), which led to its deterioration and increasing poverty, unemployment and illiteracy.

### **Second: The opportunities**

Through preparation of detailed plans of future urban sprawl areas of the city within the proposed urban border of case study cities of the target year of 2027. These opportunities can be referred to as follows:

- Moral and financial readiness of citizens to contribute to the development of expansion of urban sprawl areas.
- The ability to support businessmen and investors and motivate self-efforts for financing the projects of public services.
- Providing some governmental land (Al-Awqaf lands,...etc) in areas that allow settlement of future needs of public service.
- Providing some lands in large areas of private property, which can be negotiated for use in public services.
- Trying to set higher rates of public services for the urban sprawl and expansion areas than the current existing rates.
- Using the waterways (River Nile, main canals) and waterfronts as entertainment and tourist areas.
- Transmitting undesirable uses; such as cemeteries, prisons and heavy factories outside the built-up area to desert lands or near new cities and exploiting these areas, after evacuating them, as open areas, services areas, or residential areas to accommodate the population growth.
- Existence of new urban communities as a desert extension adjacent to the governorate that can play an important role in attracting population growth and reduce the population pressure on the urban structures in rural and urban areas.

### **2.3 Proposed Vision To Deal With The Urban Sprawl Areas**

In the framework of preparation of detailed urban plans for developing expansion and urban sprawl areas, which represents one of the main outputs of the national project preparation of general and detailed strategic plans of Egyptian cities, a proposed vision can be set for the system of integrated policies on national, regional and local level to deal with the urban sprawl areas in case study cities - Table No. (3). This system aims at assuring the growth of these areas in a planned way instead of random expansion, and contributes positively in the sustainability of these areas and achieving its social and economic aims. This prevents the neglect and lack of implementation of the detailed plans of these areas. It depends on five main pillars (legislation, financing, community participation, the land, administrative and institutional framework), and requires the existence of an effective agreement among them, as follows:

- The First Pillar: Legislation: Review the validity of laws, legislation, and the current regulations and updating them in order to fulfill financial, administrative and planning aspects for dealing with lands and projects of urban sprawl areas. This also helps in the development of the areas adjacent to the random peripheral areas specified in the general and detailed strategic plans.

- The Second Pillar: Financing: Establishment of real estate development company (Public money) in partnership with the governorate whereas the company possesses big financial and executive capabilities. Another alternative is a stock exchange company or a subsidiary company of a bank, in a way that the bank gets a percentage of the projects to sell and collect its price on long term installments. Such a company makes the integrated urban development of expansion areas in the certified urban border of city.

- The Third Pillar: Community Participation: To identify the needs for land according to the specific citizen standards. Starting from the right of suitable house by possession guaranteed by law, providing the appropriate living conditions as well as providing public services and facilities within appropriate cost limits, taking into consideration sustainability of these needs.

- The Fourth Pillar: Land: The availability of lands owned by the state in expansion and sprawl areas in the Egyptian cities or the new urban communities in desert areas adjacent to the valley and Delta. This can help to absorb a large part of the population increase. Gathering small properties by expropriation for public benefit, after compensating the previous owners, and combining these properties in one area in order to prepare an integrated plan for the development of these areas. In addition to establishment of information system specialized for the expansion areas to secure the tenure properly and can be used to monitor the land distribution. This can provide a base for the tax system on properties, take the necessary measures to apply an electronic system for land management providing information about real estate and their transactions via internet. Together with preparing technically qualified personnel at the engineering departments to manage the urban development process.

- The Fifth Pillar: Administrative and Institutional Framework: By strengthening the frameworks of local, central governmental and non-governmental institutions (Private sector, NGOs) to ensure the implementation of urban sprawl plans. This can be achieved by supporting the local administrations with its requirements from trained staff and means that enable it to achieve the requirements of urban sprawl in the certified plan. Together with the coordination between the local, regional and central involved agencies to work in an integrated and compatible framework.

**Table (3)** The Proposed system of integrated policies to deal with the urban sprawl areas in case study cities at the national, regional and local levels.

Pillars	National Level	Regional Level	Local Level
Legislation	<ul style="list-style-type: none"> <li>Activation of current law or the issuance of a unified legislation to organize the financial, administrative and planning aspects of management system of expansion and urban sprawl areas in order to ensure its quality and continuity.</li> </ul>	<ul style="list-style-type: none"> <li>Achievement of future national trends and strategies for providing all kinds of housing and public services at all levels.</li> </ul>	<ul style="list-style-type: none"> <li>Recognition of customary tenure system within a legal framework which ensures ownership and possession.</li> <li>Enabling the municipalities to own lands in the certified urban border of city.</li> </ul>

Pillars	National Level	Regional Level	Local Level
Financing	<ul style="list-style-type: none"> <li>Investments mobilization and raising the efficiency of allocation of financial resources to implement the development projects.</li> <li>Encouragement of private sector to invest in the establishment of residential buildings and public services, then renting them to service agencies for a limited period with a rent that guarantees high returns. After that, its possession is reverted to the state.</li> </ul>	<ul style="list-style-type: none"> <li>Propose procedures and mechanisms which determine methods and resources of funding and financial support of urban sprawl projects in accordance with specific priorities and certain funding and executive timetables in a regional and local integrated framework.</li> <li>Phased development; the real estate company recovers the costs of development and extending the public utilities.</li> </ul>	<ul style="list-style-type: none"> <li>Funding housing and public services projects through donation or international and local grants.</li> <li>Charging fees against reservation of lands allocated to public services without development to prevent commercial speculation upon it.</li> <li>Activating competition in all kinds of public services to reduce the cost of providing these services</li> </ul>
Land	<ul style="list-style-type: none"> <li>Ownership deprivation and resale at the market price policy: According to law no. (10) in 1990, and construction law no. (119) in 2008 for urban expansion lands of the city strategic plan. These lands can be used for public benefit purposes after paying an adequate price, by the executive authorities which will establish infrastructure of these lands including roads construction and supply services, then selling the land at the market price after dividing it.</li> </ul>	<ul style="list-style-type: none"> <li>Land Purchase Policy: The proposed real estate development company buys some or all urban sprawl lands at the urban border certified by the city.</li> <li>Exchange of Land in return of land Policy: By compensation of aggrieved land owners who swapped their land for public benefit, with another land equal or bigger in area, according to their market value.</li> <li>Improvement allowance policy: By collecting price difference from owners of buildings and land whose values increased due to preparation of detailed plans of urban sprawl areas, this money is used in providing public services and utilities.</li> </ul>	<ul style="list-style-type: none"> <li>Land Availability Policy: Providing land owned by the state at expansion and urban sprawl areas or throughout grants and donations of citizens, associations, trade unions and civil society organizations.</li> <li>The full removal, re-division and resettlement Policy: It depends on the idea of removal of old and ruined buildings, then re-planning the area and exploiting it in urban development with the possibility of resettlement of the same residents at the area.</li> </ul>
Community Participation	<ul style="list-style-type: none"> <li>Providing suitable housing by the state for everyone together with encouragement of community participation in housing support for poor and low-income people and providing public services.</li> </ul>	<ul style="list-style-type: none"> <li>Possibility of partnership of land owner of urban sprawl areas with proposed real estate development company in the development projects and fulfillment of educational and health public services on their lands in accordance with technical specifications set by concerned authorities.</li> <li>Development of adequate awareness of citizens towards the importance of commitment to the requirements of management of urban sprawl areas and accomplishment of its immediate and deferred aims.</li> </ul>	<ul style="list-style-type: none"> <li>Direct community participation in the preparation of general and detailed strategic plans of the urban sprawl areas. Together with participation in making decisions and specifying roles and responsibilities of civil society individuals and institutions in the achievement of these plans.</li> </ul>

Pillars	National Level	Regional Level	Local Level
Administrative and institutional Framework	<ul style="list-style-type: none"> <li>• Prepare a national strategy of housing and services, integrated with development plans of existent cities and new urban communities.</li> <li>• Adjust and strengthen central institutions structures, together with the local governmental and non-governmental institutions (Private sector, civil associations) in order to accomplish the urban sprawl plans.</li> <li>• Institutional support and good training of local administration.</li> <li>• The freedom of data and information transfer and knowledge partnership.</li> <li>• Cooperation and coordination with authorities granting projects and services.</li> </ul>	<ul style="list-style-type: none"> <li>• Providing the technical support, capacity building and setting an update plan of geographical data and its local requirements responsible for sustainable urban development in cities.</li> <li>• Set procedures to allow following, evaluating and controlling phases of urban sprawl, which usually depends on administrative system by result, which depends on specifying a logic frame to resources, activities, outputs and targets.</li> <li>• Achievement of coordination required among the local, regional and central concerned authorities to work in a framework of integration and compatibility.</li> </ul>	<ul style="list-style-type: none"> <li>• Application of decentralized system in the management of expansion and urban sprawl, specifying companies, administrative structures and institutions responsible for the implementation and follow-up.</li> <li>• Application of planning and building conditions of urban sprawl and requirements for building services design.</li> <li>• Support local authorities by trained key staff and means which enable them to follow-up and achieve requirements of urban sprawl management in different stages at the certified plan.</li> </ul>

Source: Researcher

### 3 CONCLUSION

This research discussed a basic theoretical issue which is the urban sprawl phenomenon in terms of the concept and its main problems at the global, Arab and local levels. In the first part, an analytical study was done for some large Egyptian cities (more than 100 thousand people) to detect the main features of urban structure of the Egyptian city, the main attraction factors, trends and consequences of urban sprawl of the Egyptian city. Next, the second part dealt with the urban sprawl reality and its sustainability under the framework of national project to prepare the strategic plans of Egyptian cities in terms of challenges and opportunities. The research proposed a vision for the integrated policy system at the national, regional and local levels to deal with the urban sprawl areas in the case study cities.

We believe that as long as urban population growth is an unavoidable reality in Egypt in the future; there would be a difficulty in facing the urban sprawl expansions of Large Egyptian cities because of the difficulty of influence on the demographic and land variables in the short term due to the natural, environmental, economic and social challenges which are imposed by the settlement circumstances in the desert areas, and that dealing with urban sprawl expansions in the large Egyptian cities in the absence of integration between various sectorial plans may increase the negative effects of focusing the investment and development plans in certain cities exclusively.

Moreover, the absence of integrated policies dealing with urban sprawl at the national, regional and local levels, which determine the needs, in the light of available resources, to achieve sustainable development and upgrade the urban environment and quality of its life. Furthermore, the magnitude of planning efforts needed to address the problem of urban sprawl and urban expansions in the large Egyptian cities throughout decreasing

population pressure and transferring the future overflow of its population to wherever economic profitable resources are available, on its borders or faraway in the middle of the desert.

In addition, planning the urban expansions inside the proposed urban border in the strategic plans by the activation of supply and demand forces on the urbanism. This can be achieved by continuous development of urban space, prediction of trends for the urban demand, encouragement of settlement in it and organization of the building inside the developed border. All this increases the opportunity to attract various investments and service projects which reflects on development at the local and regional levels, with a set of planning regulations and conditions to maintain the development and prevent and speculation.

Consequently, some recommendations can be suggested: First, it's important to review terms of reference (TOR) to prepare the strategic plan of Egyptian cities by the General Organization For Physical planning to ensure the application of the proposed system of integrated policies to deal with the urban sprawl areas in large Egyptian cities (more than 100 thousand people) that relies on five pillars which are legislation, financing, community participation, land, administrative and institutional structure. The strategic plans outputs provide comprehensive, accurate and real indicators about urban sprawl in the Egyptian cities to supply the decision and development policy makers in the state to contribute in the preparation and development of the national urban policies.

Second, the necessity of community and citizen participation in the preparation of the strategic plans of cities regarding decisions involving urban sprawl areas inside the urban border because these decisions concern characteristics of housing environment and job opportunities in these areas in a direct way.

The third recommendation is the necessity of the local authorities to have decentralized finance through the development of its local resources such as the establishment of a real estate company to allow the development and progress of urban sprawl in a method that is integrated with the surrounding environment characteristics and local society needs.

Fourth recommendation ensures the necessity of cities growth and organization of their roles (as centers for population attraction and economic activities) throughout comprehensive sectorial policies and programs in the frame of local, regional and national strategic plans.

Last recommendation is the necessity of supporting the governmental programs directed to the service of low-income population, especially for small areas regarding the organization of housing lands and their provision in the strategic plan of each city.

Finally, renewal and innovation are necessary. New models in the development of urban sprawl areas should serve the local environment, fulfill its needs and improve it according to future visions of cities, as well as preparation of guidelines for principles, standards and planning and designing rates in this field. In this respect, it is important to provide e-governmental tools including data related to existing plans for land division, areas and buildings regulations and land possession records which facilitate the procedures of granting the building license. Together with land price information and the use of digital technologies and modern means such as the technology of Geographic



Information Systems (G.I.S) in setting the detailed plans of urban sprawl areas to contribute positively in solving many urban troubles.

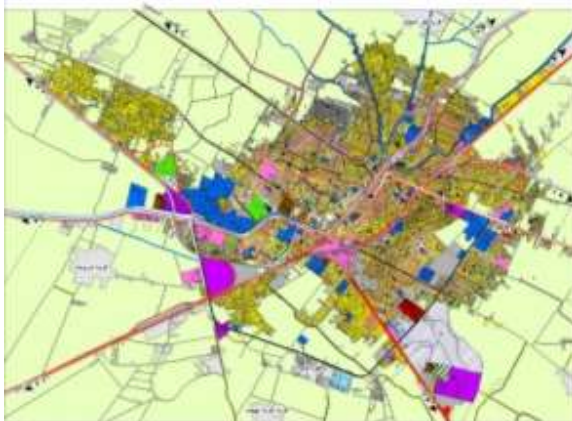
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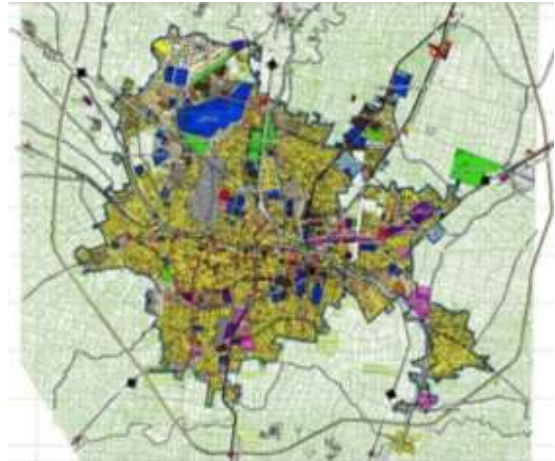
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**Figure (2)** Land uses -case study cities



Zagazig City-Al Sharqia Governorate



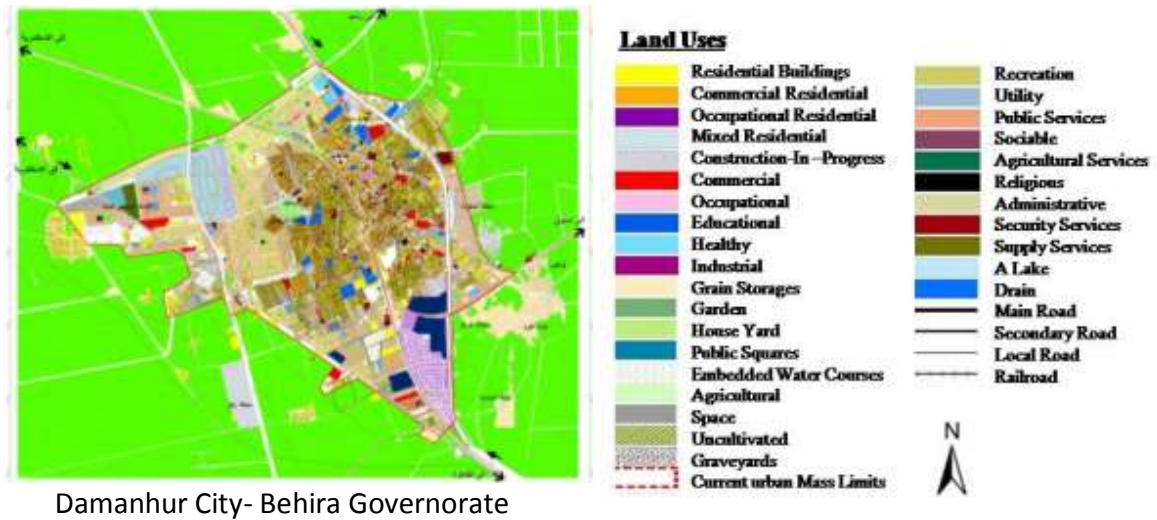
Fayoum City- Fayoum Governorate



Shebein El Kowm City- Menoufia Governorate

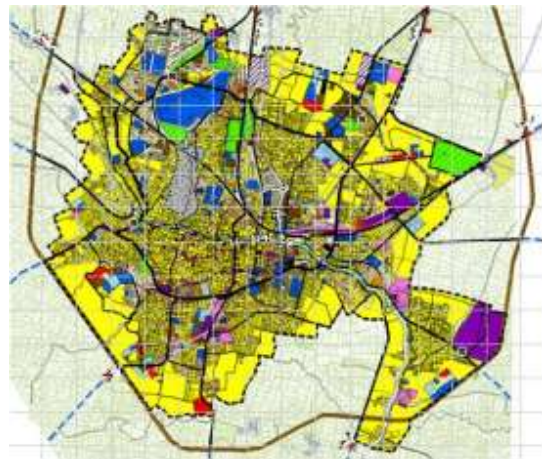
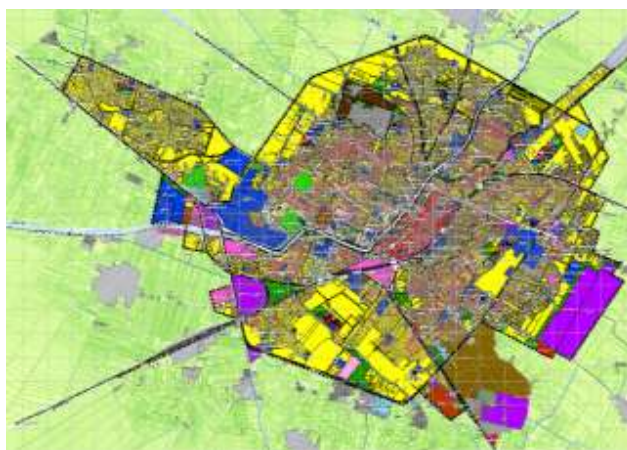


Sohag City- Soahg Governorate

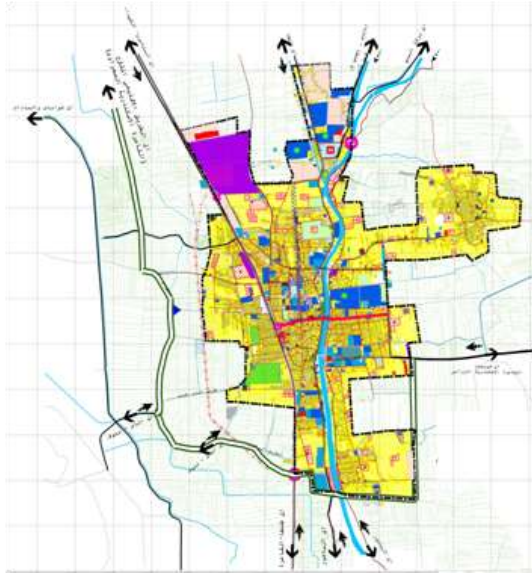


Resource: General Organization For Physical planning, General Strategic plan of Egyptian Cities 2009

**Figure (3)** The proposed plans of Land Uses of 2027 -case study cities.







Shebein El Kowm City- Menoufia Governorate



Sohag City- Sohag Governorate



Damanhur City- Behira Governorate



Resource: General Organization For Physical planning, General Strategic plan of Egyptian Cities 2009